What is claimed is:

1. A method of manufacturing an optical device comprising:

(a) on at least one of a light transmitting first substrate and a second substrate which includes a first optical element having a first optical portion and a second optical element having a second optical portion, forming a first spacer in a form to surround the first optical portion, and then forming a second spacer in a form to surround the second optical portion;

(b) sealing the first and second optical portions with the first substrate and the first and second spacers by connecting the first substrate to the second substrate with the first and second spacers interposed; and

(c) cutting the second substrate to separate the first and second optical elements respectively having the first and second sealed optical portions.

2. The method of manufacturing an optical device as defined in claim 1, further comprising:

cutting the first substrate in the step (c) ,

wherein the first substrate is cut by a first cutter, and the second substrate is cut by a second cutter.

3. The method of manufacturing an optical device as defined in claim 2,

wherein the width of the first cutter is larger than the width of the second cutter.

4. The method of manufacturing an optical device as defined in claim 1, wherein:

the first optical element has an electrode on the outside of the first optical portion, and the second optical element has an electrode on the outside of the second optical portion; and

part of the first substrate located above the electrodes is removed by cutting the first substrate in the step (c).

5. The method of manufacturing an optical device as defined in claim 2, wherein:

the first substrate has a groove; and

the first substrate is cut along the groove in the step (c).

6. The method of manufacturing an optical device as defined in claim 1, wherein:

each of the first and second spacers has a thermosetting resin; and

the first and second substrates are connected by heating the first and second spacers in the step (b).

7. The method of manufacturing an optical device as defined in claim 6, wherein:

the first and second spacers are heated at a first temperature in the step (b); and

the thermosetting resins are preliminarily cured by heating the first and second spacers at a second temperature which is lower than the first temperature before the step (b).

8. The method of manufacturing an optical device as defined in claim 1, wherein:

each of the first and second spacers has a light curing resin; and

the first and second substrates are connected by irradiating the first and second spacers with light in the step (b).

9. The method of manufacturing an optical device as defined in claim 8, wherein:

the first and second spacers are irradiated with light having a first energy in the step (b); and

the light curing resins are preliminarily cured by irradiating the first and second

spacers with light having a second energy which is lower than the first energy before the step (b).

10. The method of manufacturing an optical device as defined in claim 1, wherein:

the first and second spacers are formed of a metal; and

the first and second spacers are soldered by the metal in the step (b).

11. The method of manufacturing an optical device as defined in claim 10,

wherein a soldering material is provided on a position on one of the first and second substrates opposite to the other of the first and second substrates to which one of the first and second spacers is attached, before carrying out the soldering.

12. The method of manufacturing an optical device as defined in claim 1,

wherein the first and second optical portions are sealed so that a space is formed between the first substrate and the first and second optical portions in the step (b).

13. The method of manufacturing an optical device as defined in claim 12,

wherein the first and second optical portions are sealed so that air in the space is evacuated in the step (b).

14. The method of manufacturing an optical device as defined in claim 12,

wherein the first and second optical portion are sealed so that the space is filled with nitrogen in the step (b).

15. The method of manufacturing an optical device as defined in claim 12,

wherein the first and second optical portion are sealed so that the space is filled

with dry air in the step (b).

16. The method of manufacturing an optical device as defined in claim 1, wherein the first substrate transmits at least visible light, and does not transmit infrared.

17. The method of manufacturing an optical device as defined in claim 1, wherein the second substrate is a semiconductor wafer.

18. A method of manufacturing an optical device comprising:

(a) on at least one of a light transmitting first substrate and a second substrate which includes a plurality of optical elements each having an optical portion, forming a plurality of spacers in a form to respectively surround the optical portions by ejecting a material;

(b) sealing the optical portions with the first substrate and the spacers by connecting the first substrate to the second substrate with the spacers interposed; and

(c) cutting the second substrate to separate the optical elements respectively having the sealed optical portions.

19. The method of manufacturing an optical device as defined in claim 18, wherein the material is ejected by a dispenser in the step (a).

20. The method of manufacturing an optical device as defined in claim 19, wherein:

the step (a) includes revolving a nozzle of the dispenser from a start point to an end point so as to surround each of the optical portions; and

of the material, a first portion provided at the start point and a second portion

provided at the end point are spaced apart.

21. The method of manufacturing an optical device as defined in claim 18, wherein the material is ejected by an inkjet method.

22. The method of manufacturing an optical device as defined in claim 18, wherein:

the spacers includes a first spacer and a second spacer; and

the first spacer is formed at first, and then the second spacer is formed in the step (a).

23. The method of manufacturing an optical device as defined in claim 18, wherein the spacers are formed in a single operation with at least one of the first and second substrates in the step (a).

24. The method of manufacturing an optical device as defined in claim 18, further comprising:

cutting the first substrate in the step (c) ,

wherein the first substrate is cut by a first cutter, and the second substrate is cut by a second cutter.

25 The method of manufacturing an optical device as defined in claim 24, wherein the width of the first cutter is larger than the width of the second cutter.

26. The method of manufacturing an optical device as defined in claim 18, wherein:

the optical elements have electrodes on the outside of the optical portions; and

part of the first substrate located above the electrodes is removed by cutting the first substrate in the step (c).

27. The method of manufacturing an optical device as defined in claim 24, wherein:

the first substrate has a groove; and

the first substrate is cut along the groove in the step (c).

28. The method of manufacturing an optical device as defined in claim 18, wherein:

each of the spacers has a thermosetting resin; and

the first and second substrates are connected by heating the spacers in the step (b).

29. The method of manufacturing an optical device as defined in claim 28, wherein:

the spacers are heated at a first temperature in the step (b); and

the thermosetting resins are preliminarily cured by heating the spacers at a second temperature which is lower than the first temperature before the step (b).

30. The method of manufacturing an optical device as defined in claim 18, wherein:

each of the spacers has a light curing resin; and

the first and second substrates are connected by irradiating the spacers with light in the step (b).

31. The method of manufacturing an optical device as defined in claim 30,

wherein:

the spacers are irradiated with light having a first energy in the step (b); and

the light curing resins are preliminarily cured by irradiating the spacers with light having a second energy which is lower than the first energy before the step (b).

32. The method of manufacturing an optical device as defined in claim 18, wherein:

the spacers are formed of a metal; and

the spacers are soldered by the metal in the step (b).

33. The method of manufacturing an optical device as defined in claim 32,

wherein a soldering material is provided on a position on one of the first and second substrates opposite to the other of the first and second substrates to which one of the spacers is attached, before carrying out the soldering.

34. The method of manufacturing an optical device as defined in claim 18,

wherein the optical portions are sealed so that a space is formed between the first substrate and the optical portions in the step (b).

35. The method of manufacturing an optical device as defined in claim 34,

wherein the optical portions are sealed so that air in the space is evacuated in the step (b).

36. The method of manufacturing an optical device as defined in claim 34,

wherein the optical portion are sealed so that the space is filled with nitrogen in the step (b).

37. The method of manufacturing an optical device as defined in claim 34,

wherein the optical portion are sealed so that the space is filled with dry air in the step (b).

38. The method of manufacturing an optical device as defined in claim 18,

wherein the first substrate transmits at least visible light, and does not transmit infrared.

39. The method of manufacturing an optical device as defined in claim 18,

wherein the second substrate is a semiconductor wafer.

40. A method of manufacturing an optical device comprising:

(a) on at least one of a light transmitting first substrate and a second substrate which includes a plurality of optical elements each having an optical portion, forming a plurality of spacers in a form to respectively surround the optical portions by adhering a plurality of sheets;

(b) sealing the optical portions with the first substrate and the spacers by connecting the first substrate to the second substrate with the spacers interposed; and

(c) cutting the second substrate to separate the optical elements respectively having the sealed optical portions.

41. The method of manufacturing an optical device as defined in claim 40, wherein:

the sheets are fixed to a third substrate; and

the step (a) includes transferring the sheets from the third substrate to the first or second substrate.

42. The method of manufacturing an optical device as defined in claim 41, wherein the third substrate is a light curing tape.

43. The method of manufacturing an optical device as defined in claim 40, further comprising:

cutting the first substrate in the step (c) ,

wherein the first substrate is cut by a first cutter, and the second substrate is cut by a second cutter.

44. The method of manufacturing an optical device as defined in claim 43, wherein the width of the first cutter is larger than the width of the second cutter.

45. The method of manufacturing an optical device as defined in claim 40, wherein:

the optical elements have electrodes on the outside of the optical portions; and

part of the first substrate located above the electrodes is removed by cutting the first substrate in the step (c).

46. The method of manufacturing an optical device as defined in claim 43, wherein:

the first substrate has a groove; and

the first substrate is cut along the groove in the step (c).

47. The method of manufacturing an optical device as defined in claim 40, wherein:

each of the spacers has a thermosetting resin; and

the first and second substrates are connected by heating the spacers in the step

(b).

48. The method of manufacturing an optical device as defined in claim 47, wherein:

the spacers are heated at a first temperature in the step (b); and

the thermosetting resins are preliminarily cured by heating the spacers at a second temperature which is lower than the first temperature before the step (b).

49. The method of manufacturing an optical device as defined in claim 40, wherein:

each of the spacers has a light curing resin; and

the first and second substrates are connected by irradiating the spacers with light in the step (b).

50. The method of manufacturing an optical device as defined in claim 49, wherein:

the spacers are irradiated with light having a first energy in the step (b); and

the light curing resins are preliminarily cured by irradiating the spacers with light having a second energy which is lower than the first energy before the step (b).

51. The method of manufacturing an optical device as defined in claim 40, wherein:

the spacers are formed of a metal; and

the spacers are soldered by the metal in the step (b).

52. The method of manufacturing an optical device as defined in claim 51,

wherein a soldering material is provided on a position on one of the first and

second substrates opposite to the other of the first and second substrates to which one of the spacers is attached, before carrying out the soldering.

53. The method of manufacturing an optical device as defined in claim 40, wherein the optical portions are sealed so that a space is formed between the first substrate and the optical portions in the step (b).

54. The method of manufacturing an optical device as defined in claim 53, wherein the optical portions are sealed so that air in the space is evacuated in the step (b).

55. The method of manufacturing an optical device as defined in claim 53, wherein the optical portion are sealed so that the space is filled with nitrogen in the step (b).

56. The method of manufacturing an optical device as defined in claim 53, wherein the optical portion are sealed so that the space is filled with dry air in the step (b).

57. The method of manufacturing an optical device as defined in claim 40, wherein the first substrate transmits at least visible light, and does not transmit infrared.

58. The method of manufacturing an optical device as defined in claim 40, wherein the second substrate is a semiconductor wafer.